

**Reyco Site Investigation Work Plan
Property Redevelopment
Reyco Madison, Inc.
BRRTS 02-13-315773
1401 Packers Avenue
Madison, Wisconsin**

April 12, 2012

Prepared for:

Reyco Madison, Inc.

**Wisconsin DNR
3911 Fish Hatchery Road
Madison, WI**

**Prepared by:
IverTech LLC
2880 Jonathan Circle
Madison, WI 53711**

Project No. 7562

IVERTECH LLC

MEMO

TO: Jim Walden-Wisconsin DNR
FROM: Dennis Iverson-IverTech LLC
SUBJECT: Reyco Site Investigation Work Plan
DATE: April 19, 2012

Copies

Jim,

Per your request, attached is a hard copy of our Reyco Work Plan.

Regards,

Dennis

RECEIVED

APR 20 2012

Remediation &
Redevelopment

IVERTECH LLC

April 12, 2012

Mr. James Walden, Hydrogeologist
Remediation and Redevelopment
Wisconsin DNR
3911 Fish Hatchery Road
Madison, WI 53711

Re: Reyco Site Investigation Work Plan
Property Redevelopment
Reyco Madison, Inc.
BRRTS 02-13-315773
1401 Packers Avenue
Madison, Wisconsin

Dear Mr. Walden:

On behalf of Reyco Madison, Inc. (Reyco) and in response to our February 21, 2012 meeting, our February 22, 2012 meeting memo, and your subsequent March 1, 2012 email, we are submitting a proposed work plan for investigating the source of the elevated chromium levels in groundwater identified on the subject Property.

As agreed, following resolution of the groundwater exceedance issue, we intend to submit a request for an exemption to build on an abandoned landfill as part of site redevelopment.

Since the DNR has indicated that chromium in groundwater is believed to be a site wide issue, we have structured our proposed workplan based a review of what we feel is applicable historic information on the property and the adjacent Truax landfill site (Section 1.0). We then identified point of standards application issues (Section 2.0) and subsequent analysis of the information (Section 3.0) to formulate conclusions on likely source areas to assist in proposed investigation activity (Section 4.0).

To date, the primary investigation strategy has focused on the existence of sludge lagoons on the Property. Historic property use included a wastewater treatment plant from about 1914 to 1978. Sludge lagoons were used as part of the treatment process over the period from about the early 1950's to the mid 1970's.

*IverTech LLC
2880 Jonathan Circle
Madison, WI 53711*

1.0 SUMMARY OF KEY HISTORIC INFORMATION

JANUARY 10, 2002 PHASE I ESA

The following information was obtained from the Phase I ESA dated January 10, 2002 completed by Midwest Environics, Inc. (MEI). We understand that the DNR has a file copy of this document.

The text of the Phase I ESA summarizes information provided in the attached appendices. The following are key items gleaned from the report. Refer to the diagram in Appendix A for location of site features.

- Page 11 summarizes information from a May 16, 1980 Warzyn Engineering report. The MEI report noted that, while the report was primarily tasked with geotechnical issues related to site development, it did note the existence of "Shallow lagoons have been constructed along the east sections of the Property." The report noted the issue of the adjacent Truax landfill, but the concerns were primarily related to landfill gas.
- Page 14 noted that Reyco, in the late 1980's or early 1990's "Former sludge lagoons at the property were also closed by filling then in with fill material brought to the property by Madison Crushing and Excavating. "
- Page 14 also noted from discussions with James Nemke of MMSD that six sludge lagoons were constructed for use by Oscar Mayer, four of which were located on the parcel to the east and two on the Property. Lagoon 7 was constructed in 1968 and further noted, "Therefore, sludge was disposed in the former sludge lagoons at the subject property during the years that Oscar Mayer operated the wastewater treatment plant."
- Page 15 noted, "At one point, it was alleged that past disposal of sludge in the sludge lagoons at the Burke Wastewater Treatment Plant contributed to contamination at the landfill but nothing ever came of this allegation and MMSD was never named as a responsible party for the Truax Field Landfill contamination."
- Page 16 the report notes that, based on an interview with a former Oscar Mayer employee, Oscar Mayer also buried ash prior to 1958. "The ash was primarily used to prepare roads to the north and northeast of the Burke Wastewater Treatment facilities on the property." He estimated that the ash was disposed in an area that was to the northeast of the wastewater treatment plant's trickling filter and about 250 feet east of the western chain link security fence. The hog hair and toenails were also disposed in the northeast area of the subject property."
- Page 19 notes the wastewater treatment plant was in operation from about 1914-1978. Sludge lagoons 3 and 4 on the Property were constructed in the early 1950's and may have been in use until 1978. Sludge lagoon 7 was reportedly constructed in 1968 and may have been used until plant closure in 1978.

- Page 27 notes from discussions with RMT staff (consultant retained by Dane County to monitor the Truax landfill) addressing the discovery of heavy metals in soils at the landfill sit, "The remediation of high levels of heavy metals in soils can obviously be accomplished by excavation of the soils." This obviously suggests there is a heavy metals issue associated with the adjacent Truax landfill.
- Page 28 under Conclusions it states that "materials known to have been disposed at the subject property include, 1) sludge in the former sludge lagoons in the northeast and southeast areas of the property, 2) ash in the northeast area of the property from Oscar Mayer's coal-fired boilers during the 1950's, 3) hog hair and toenails in the northeast area of the subject property from the slaughtering of hogs at Oscar Mayer in the early 1950's to 1978, and 4) pieces of concrete and bricks from the razing of the former wastewater treatment facilities."

Appendix G- Air Photos

September 7, 1962 air photo-shows the location of sludge lagoons 3 and 4, which appear to be on the Property. Lagoons 1-2 and 5-6 are on the parcel to the east. It also shows the Truax landfill is in operation near the northern Property boundary. It appears that sludge lagoons 1 and 5 are in use.

May 8, 1968 air photo shows lagoon 1 appears to be in service and the proposed sludge lagoon shown west of Lagoons 5 and 6 is not yet constructed as suggested on the May 2, 1968 Oscar Mayer drawing referred hereafter as Lagoon 7. The landfill appears to be in operation and is not yet covered.

September 12, 1976 air photo shows lagoons 3 and 4 may be in operation, but lagoons 1-2 and 5-6 may be abandoned or not in use. Sludge lagoon 7 does not appear to be in use. The landfill no appears to be capped.

April 22, 1980 air photo shows Lagoons 1-2 and 5-6 do not appear to be in use. Lagoons 3-4 may be in use and are not covered. The Lagoon 7 area appears to be graded as a sludge lagoon, but there does not appear to be in use. The landfill appears to be closed. The treatment plant structures appear to remain in place.

April 10, 1986 air photo shows that sludge lagoons 3-4 have been covered/abandoned. The wastewater trickling filter is no longer evident but the sludge drying beds appear to remain. The Shopko store is now evident on the parcel to the southeast.

April 7, 1990 air photo shows fill material being placed over the former sludge lagoons 3-4 and other structures have been removed from the site. There is no obvious activity associated with the landfill.

March 16, 2000 shows fill material being placed in the Lagoon 3-4 area and the trickling filter has been removed. There is no obvious activity at the landfill. The golf course is now evident on the parcel to the northeast.

Appendix H-MMSD File Information

May 14, 1968 letter to MMSD from Oscar Mayer requesting permission to construct an additional sludge lagoon as shown on their attached drawing (Appendix B). The letter notes the lagoon will replace lagoons 1-2 "These two lagoons were constructed under the US Air Force approval, but since this land has been taken over by the City, our continued use is unlikely." The lagoon was proposed to have an effective 6 foot depth.

Undated Burke Sewerage Treatment Plant flow data notes Sludge Lagoons 1-4 were constructed in 1956 with 1 and 2 being constructed on Air Force land. Sludge lagoons 5 and 6 were constructed in 1957-1958. Sludge lagoon 7 was constructed in 1968.

Undated (August 1988?) Engineering report by Dennis Stack. The report was reportedly generated to assess contamination at the Truax landfill area "...to make a preliminary determination of the presence or absence of chemical contamination which may have been caused by DOD-related activities." Page 1-1 notes four potential sources of contamination in the area to include the Practice Burn Pit, Truax landfill, Burke wastewater treatment plant, and Jet Fuel Storage area. There was groundwater monitoring completed "downgradient" of the landfill, treatment plant and burn pit. The results show in well TG-2 "A relatively shallow monitoring well (TG-2) installed downgradient of the former treatment plant had concentrations of chromium, lead, and cadmium in excess of MCLs and/or MCLGs." The well is located west of the treatment plant and landfill and had a chromium concentration of 94 ug/L. TC-9 located directly west of the southwest corner of the landfill had a chromium concentration of 302 ug/L and TG-10, located west of the northern portion of the landfill has chromium concentration of 178 ug/L (see Table 1-1 in Appendix B).

October 2, 1990 letter to MMSD from Attorney Linda Clifford at LaFollette Snykin noted, "The results suggest detects and exceedances for arsenic, cadmium, and selenium concentrated at well MW-5, MW-5A, and MW-5B, and MS-6 located in the vicinity of the former sludge lagoons. This information leads to the conclusion that hazardous substances are being released from the treatment plant facility." MMSD responded October 17, 1990 stating "The District feels strongly that any pollutants, which might be confirmed in the Truax area are not the result of the District's operation of the Burke plant."

An October 29, 1990 letter from Axley Brynelson to Wausau Insurance answered a number of questions about the operation of the Burke treatment plant site. On Page 4 when asked about any releases that may have taken place on the treatment plant site, the attorney for the MMSD responded "We are not aware of any leaks, spills or other releases at the site." The letter noted Oscar Mayer ran the plant from about 1951-1978.

Letter dated December 14, 1990 from MMSD to Dave Trainor at Dames & Moore regarding asking for comments on their draft report on the Truax landfill. The letter takes

2880 Jonathan Circle Madison, WI 53711
608-273-3751 608-273-3754 (fax)
dliverson@charter.net

exception to the statement that suggests the MMSD site operations may have an impact on a monitoring well located between the landfill and the treatment plant (MW-10). The letter states, "The District is unaware of any discharge that would have occurred in the vicinity of MW-10."

August 28, 1991 letter from DNR to Peter Peshek, regarding a consent order in the Finding in Fact... asking, among other issues that additional wells be installed upgradient to the northwest and recommended grading activity be halted until the remedial action plan is developed for the landfill. The order notes groundwater flow is to the south and may be influenced by local high capacity wells to the west.

November 4, 1991 letter to DNR from Reyco requesting approval to close former sludge pond, which appears to be the Lagoon 7 area.

February 4, 1992 letter to Reyco from MMSD regarding lab results of a sludge sample they analyzed. The letter noted, "These results are typical of a domestic wastewater sludge, and should not preclude the type of closure activities that you have proposed for the former burke wastewater treatment plant." The chromium concentration noted in the sample # 1 was 10.3 ppm or 18.3 mg/kg and 7.8 ppm or 13.4 mg/kg for Sample 2.

March 30, 1992, letter from DNR to Reyco conditionally approving the lagoon closure. The conditions included maintaining groundwater monitoring wells, sampling wells quarterly for NO₃, chlorides, fecal coliform, and COD (no metals). The sludge was recommended to be landspread by incorporation based on nitrogen.

Appendix J DNR Information

August 9, 2000 letter report from RMT to DNR regarding monitoring device management. It contained a map showing all monitoring points associated with the Truax landfill (Appendix E) including wells MW-5, 5A, and 5B, TG-2, and MW-10 that appear to be on or very near the Reyco property.

November 22, 2000 RMT monitoring letter to DNR indicating, "Groundwater continues to flow to the northwest, and downward hydraulic gradients observed at well nests MW-3, MW-4, and MW-5."

DNR FILE REVIEW FOR TRUAX SITE

IverTech conducted a DNR file review associated with the Truax Landfill site. While there is a substantial amount of information on the site, we were searching for information relative to the Reyco Site. The following summarizes key information from the file review:

Truax Landfill Environmental Contamination Assessment Report dated May 1992
(Appendix C) contained:

- a summary table of monitoring well construction information including wells on the Reyco Property.
- Page 6-10 information suggesting a clay deposit underlies the Property. The report notes the clay deposit acts as a confining unit separating the upper aquifer for which the water table flows north-northwest and the lower bedrock aquifer flows southerly or westerly and is influenced by nearby high capacity wells.
- Page 6-10 which states that groundwater flow across the area "...is to the west-northwest..." "Groundwater flow over the eastern portion of the landfill appears to be to the east toward Starkweather Creek..." and "Groundwater flow near the southern edge of the landfill is south, east, and west, or away from the groundwater mound created by the perched water condition in this area of the site."
- Page 7-19, 7-30 and 7-55 notes, in regard to Groundwater Samples notes, "The heavy metals arsenic, cadmium, chromium, lead, and selenium were detected in several monitoring well samples." It also notes that arsenic concentrations of MW-10 (off the southeast corner on the landfill) exceeded the ES. Chromium was also detected in piezometer MW-3A, which is west of the landfill.
- Page 7-61 concludes that heavy metals in general were found in the area of the former wastewater treatment plant, but "...the absence of heavy metals in the piezometers screened in the lower bedrock aquifer below the aquitard, indicates that movement of these constituents are constrained by the aquitard."
- Page 7-64 under Heavy Metals states, "Shallow aerobic (oxygenated) groundwater zones are especially susceptible to hexavalent chromium contamination. Under oxidizing conditions, insoluble trivalent (Cr+3) becomes oxidized to the more soluble hexavalent chromium (Cr+6) and undergoes little retardation by adsorption."

December 15, 2010 Second Semi Annual 2010 Groundwater Monitoring Results
(Appendix D)

This document, prepared by RMT for Dane County, provides a summary of monitoring activity completed September 28-30, 2010. The report notes "Shallow groundwater at the site flows radially away from the landfill. This interpretation is historically consistent." "Regional groundwater likely flows southwesterly toward the Yahara River/Lake Mendota."

The report attached a monitoring well location map dated August 1994 prepared by Dames & Moore. The map shows that monitoring well nest MW-5, 5A, and 5B and MW-10 and TG-2 appear to be located on the Property.

Phase II ESA by REA dated April 10, 2002

The Phase II ESA by REA (we understand DNR has a copy of the report) completed soil probes, soil sampling, and groundwater sampling in three areas of the site recommended by MEI. The locations sampled included the northern portion of sludge lagoon 3, sludge lagoon 7, the decant pond, and the sludge drying bed area.

The results suggest about 9 feet of fill soils and some not putrescible waste overlying a layer of sludge in the northeastern portion of the sludge lagoon 3 area with no sludge identified in other probes. The probes in the sludge lagoon and decant pond area showed sandy fill soils to about 12-16 feet. The probes in the sludge drying bed area showed about two to three feet of fill over about a four foot layer of native clay overlying sand. Chromium levels in excess of NR 140 enforcement standards were identified at each location.

REVIEW OF AVAILABLE GROUNDWATER MONITORING DATA FOR THE TRUAX SITE

DNR staff recommended IverTech access the DNR GEMs database for groundwater monitoring data associated with the Truax landfill.

Using the Dames & Moore monitoring location map (Appendix E) and the website database, IverTech downloaded selected monitoring well locations for chromium data. Selected wells included MW 5 and 5A, MW-10, and TG-2 which appear to be located on the Property. The only low level (below PAL) detection noted for chromium was three out of eight sampling events at TG-2.

Upgradient MW-2 had detection for chromium. MW-4 located southwest of the Property and southwest of the intersection of Aberg Avenue and Packers Avenue had detections of chromium in seven of ten sampling events, however nearby TG-1 did not reveal detection. MW-6 located southeast of the Property had a detection of chromium in one of ten sampling events. MW-7 and MW-8 located east of the Property did not reveal detection for chromium. MW-11 located west of the landfill did not indicate a detection of chromium. See Appendix E for summary data sheets.

DISCOVERY OF A FORMER CITY OF MADISON LANDFILL RESEARCH PROJECT

As part of site redevelopment activities in the summer of 2011, the concrete walls of the former sludge drying beds (see Figure 2 in Appendix F) were removed. The removal activity was completed from southeast to northwest. The concrete structures were partially visible, but mostly buried at depths of about 6-8 feet. The top area of the beds were nearly at grade level and covered with vegetation varying from native grass to small trees. Upon removal the foundations in the area identified on Figure 2, the excavation contractor identified what appeared to be solid waste.

IverTech was retained by Reyco to provide assistance in mid August 2011. Initial measures included conducting test pits to determine the nature and vertical extent of the exposed waste. It was determined that the waste appeared to be municipal in nature with no signs of hazardous materials. The waste appeared to be well stabilized (no sign of garbage, limited sign of paper, no odor, mostly soil, glass, and plastic). The waste was about 4-6 feet in depth.

As the excavation of waste expanded laterally it became evident that the waste placement was far more extensive than anticipated and the waste disposal area included what appeared to be a bituminous paved/plastic sheeting liner system in individual cells that sloped to what appeared to be leachate sumps. As such it became evident that the waste was placed in an engineered fashion and not randomly dumped.

Reyco had contact with MMSD and the City regarding the situation and MMSD indicated it wanted more information on the nature and extent of the waste prior making any offer of assistance.

Because the volume of waste far exceeded the initial volume estimate, Reyco (with direction provided by IverTech) decided to define the extent of the waste placement by excavation and stockpiling within the footprint of the waste area. The waste was found to be about 5-6 feet in depth and contained within the walls of the former sludge drying beds. The limit of waste was found to be as noted on attached Figure 2. The waste is primarily stockpiled in quadrant labeled "2" on Figure 2. The waste volume has been estimated to be about 2000 cubic yards. Based on the truck tonnages, it appears the unit weight of the waste is about 2000 pounds per cubic yard. The waste consists primarily of soil (perhaps 75% by weight), with lesser quantities of plastic, glass, some wood, limited organics (carpeting, paper, etc).

Following discussions with Linda Hanefeld during waste removal, it was agreed that IverTech would collect soil samples from beneath the "liner system". Two soil samples were collected from beneath cell labeled "2" on Figure 2. The samples were analyzed for VOC. There were no detections noted.

2.0 POINT OF STANDARDS APPLICATION ISSUE

NR 140.22 Point of Standards Application for Design and Compliance provides information on the point of standards application (design management zone or DMZ) for various regulated activities.

Table 4 in that section notes the DMZ for landfills is 250 feet from the landfill and/or the property line. Based on a review of recent property survey mapping, it appears the Truax landfill has encroached onto the subject property suggesting the DMZ extends 250 feet beyond the southern portion of the landfill as noted on the RMT location noted in Appendix E. The marked up Figure 2 (Appendix A) from the REA Phase II ESA notes the approximate extent of the landfill DMZ.

*2880 Jonathan Circle Madison, WI 53711
608-273-3751 608-273-3754 (fax)
dliverson@charter.net*

The Monitoring Locations map attached to the December 15, 2010 RMT quarterly Monitoring report (Appendix D) also shows the locations of sampling points, limits of waste, and limits of the 250 foot Design Management Zone, which appears to extend well onto the subject property.

Based on Table 4 in NR 140.22 the DMZ for the former sludge lagoons is 100 feet from the edge of the lagoons.

Based on the above information and the marked up REA Figure 2 Appendix A), it appears that the Phase II ESA activity completed by REA was conducted in the sludge lagoon 3 (SL 3) area for probes B-1 through B-4 and in sludge lagoon 7 for probes B-9 through B-11, the former decant pond for probes B-12 and with the sludge drying beds for probes B-5 and B-6, and very near the sludge drying beds for probes B-7 and B-8. NR 140.24 requires response for exceedances which are measured at the point of standards application.

3.0 ASSESSMENT OF BACKGROUND INFORMATION

Based on the above information, it appears that former sludge lagoons No. 3, No. 4 and No. 7, and possibly fly ash disposal were the only potential sources identified on the Property that required further investigation. The former long time owner, MMSD, repeatedly has stated they are not aware of any release on the Property. The Phase II ESA activities included soil and groundwater sampling in the three former lagoon areas. There were no other potential source areas identified.

The only indication of encountering sludge noted in the Phase II ESA was probe B-1 within former sludge lagoon No. 3, and that was only 1-2 feet at one location. The samples collected in the Phase II ESA activity appear to have been obtained from directly beneath the sludge lagoons/sludge drying beds and not at the DMZ.

There is limited information available on the volume or handling of the sludge in the lagoons, except for decommissioning activity by Reyco in sludge lagoon 7 where the sludge was removed. In addition, over 30 years have passed since the time the lagoons were in service. As such, it is highly probable that any sludge that remained at that time has decomposed and along with it, the potential source area for ongoing release of contaminants.

The former sludge drying beds located in the area of B-5 and B-6 in the Phase II ESA did not encounter sludge and the area of the landfill experiment (Appendix F) was reconfigured in the early 1970's. As such there was no documented sludge in that area since that time. In approving the decommissioning of sludge lagoon 7 the DNR, in their March 30, 1992 approval noted that the chemical composition of the sludge was typical for municipal sludge and there was no additional requirement to sample the sludge for heavy metals.

Site investigation information completed associated with the Truax landfill site suggests the Property is located over a clay layer that appears to act as a confining unit/aquitard separating the shallow groundwater flow system, which appears locally to be flowing northwesterly, and the deeper bedrock aquifer which appears to flow southerly.

The adjacent Truax landfill has documented groundwater contamination that includes heavy metals including chromium. In addition, there is documentation that a groundwater mound exists within the landfill that has created radial groundwater flow that has likely reached the Property. The DMZ for the landfill extends about 250 feet onto the Property along much of the northern boundary. As such, data collected within the DMZ or perhaps further from the landfill, could likely be representative of comingling of two potential contaminant source area plumes (landfill and sludge lagoons) and separation of impacts is thus likely very subjective.

Historic monitoring data from the existing monitoring network associated with the Truax landfill, specifically data from the late 1980's compared to more recent data, suggest the chromium concentrations in groundwater have reduced on the Property and the vicinity.

There currently appears to be three groundwater monitoring locations on the Property that are monitored as part of the Truax landfill situation. The data generated from historical sampling of these sampling locations revealed no detection of chromium in two locations, (MW-10 and MW-5). MW-10, which appears to be located near the boundary of former sludge lagoon No 3 did not reveal a detection for chromium. TG-2 located in the south-central portion of the Property did reveal a low level (below PAL) in three historic sampling events nearly ten years ago. This information suggests that although there may be localized elevated levels of chromium, there does not appear to be exceedances with distance from the site.

In terms of potential receptors, it appears that the clay underlying the site may limit contaminant migration into the locally used aquifer.

4.0 PROPOSED INVESTIGATION PROGRAM

The Phase II ESA investigation, former sludge lagoon decommissioning (Sludge Lagoon 7 and Decant Pond area), and the work last fall in the former landfill experimental area suggest there are limited contaminant source areas on the Property and any identified contaminants are likely residual impacts from historic on site sludge lagoon activity and/or impact from the adjacent Truax landfill. As such, the proposed site investigation activity will be limited to additional direct push soil and groundwater sampling in the former sludge pond areas (GP-1, GP-2, GP-4, GP-5), the former sludge drying bed area (GP-7), and two sampling locations about 100 feet (DMZ) west (GP-3) and northwest (GP-6) from the sludge lagoons (see marked up Figure 2 in Appendix A).

The soil sampling will include observing and logging the soil column, and collecting one sample per location for laboratory analysis for total chromium. The soil sample will be collected in any area of identified sludge, or if no sludge is observed, it will be collected native soils underlying the fill soils. The soil probe locations and elevations will be obtained by surveying.

Groundwater samples at each sampling location will be obtained by extending the push probe into the top few feet of the groundwater table, which is expected to be encountered between 12 and 16 feet. The groundwater samples will not be filtered and will be analyzed for total chromium.

If access can be secured groundwater samples for total chromium and water table elevations will be obtained from MW-5, MW-10, and TG-2.

The results and analysis of the sampling activity will be summarized in an investigation report to the DNR.

We intend to complete the investigation work within 45 days of receiving DNR concurrence to proceed.

5.0 SUMMARY

We believe the workplan reflects a diligent effort to assess relevant historic information to develop recommended investigative efforts of likely source areas.

If you have any questions, please feel free to contact us at any time.

Sincerely,
IverTech LLC



Dennis L. Iverson, P.E.
Principal Engineer

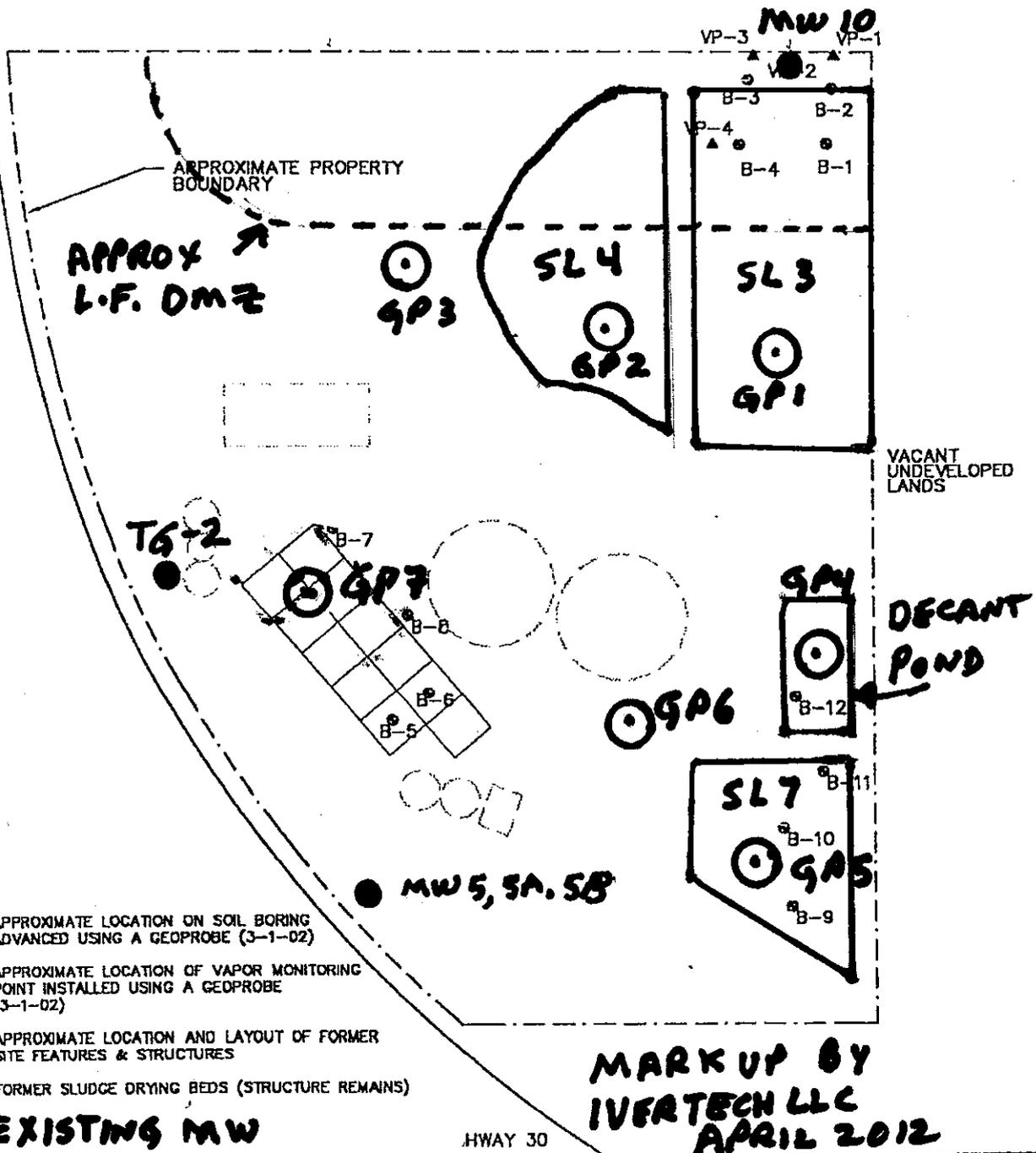
Copies: Mr. David Reynolds-Reyco Madison, Inc
Mr. Carl Ruedebusch-Ruedebusch Development

APPENDIX A

FIGURE 2-SITE MAP AND PROPOSED SAMPLING LOCATIONS

FORMER TRUAX LANDFILL
(CURRENT BRIDGES GOLF COURSE)

PACKERS AVENUE



LEGEND

- B-12 APPROXIMATE LOCATION ON SOIL BORING ADVANCED USING A GEOPROBE (3-1-02)
- ▲ VP-3 APPROXIMATE LOCATION OF VAPOR MONITORING POINT INSTALLED USING A GEOPROBE (3-1-02)
- [] APPROXIMATE LOCATION AND LAYOUT OF FORMER SITE FEATURES & STRUCTURES
- [] FORMER SLUDGE DRYING BEDS (STRUCTURE REMAINS)
- **EXISTING MW**

**MARK UP BY
IVERTECH LLC
APRIL 2012**

NOTES

- 1) All dimensions and locations are approximate and are based on data from previous site reports and maps.
- 2) Geoprobe soil borings and vapor sampling points installed on March 1, 2002 by Soil Essentials. Sampling points located using fence line.
- 3) See Figure 1 for site location relative to Madison, Wisconsin.

○ **PROPOSED
SAMPLING
LOCATION**



SCALE: 1" = 200'

RESOURCE ENGINEERING ASSOCIATES, INC. 8505 University Green, Suite 200 Middleton, Wisconsin 53562-2507 608-831-6563 (Fax 831-6564)	REYNOLDS PROPERTY 1401 Packers Avenue Former Burke Wastewater Treatment Plant Madison, Wisconsin	Date: Mar 2002 Drawn: SKB Ck'd: WWB Proj: #02008.1
	SITE LOCATION, FORMER FEATURES & GEOPROBE SOIL BORING LOCATIONS	reynolds2.dwg FIGURE 2

APPENDIX B

**1968 SLUDGE LAGOON LOCATION MAP AND
STACK INVESTIGATION REPORT MAP AND TABLE 1-1**

PROJ. NO. 4-131-M

DRG. NO. A-1075

HIGHWAY 113

REVCO PROPERTY

CITY

M.M.S.D. PROP. LINE

BURKE

SLUDGE 4 3

LAGOONS 2 1

MADISON

PLANT

Power Tower

SLUDGE 5

LAGOONS 6

PROPOSED SLUDGE LAGOON NO. 7

CONNECTOR HIGHWAY

PROPOSED 1968 SLUDGE LAGOON BURKE WASTE TREATMENT PLANT

OSCAR MAYER & CO.
GENERAL PLANNING
& ENGINEERING DIV.
MADISON, WISCONSIN

SCALE
NONE

DRAWN BY
DOD

CHK'D BY

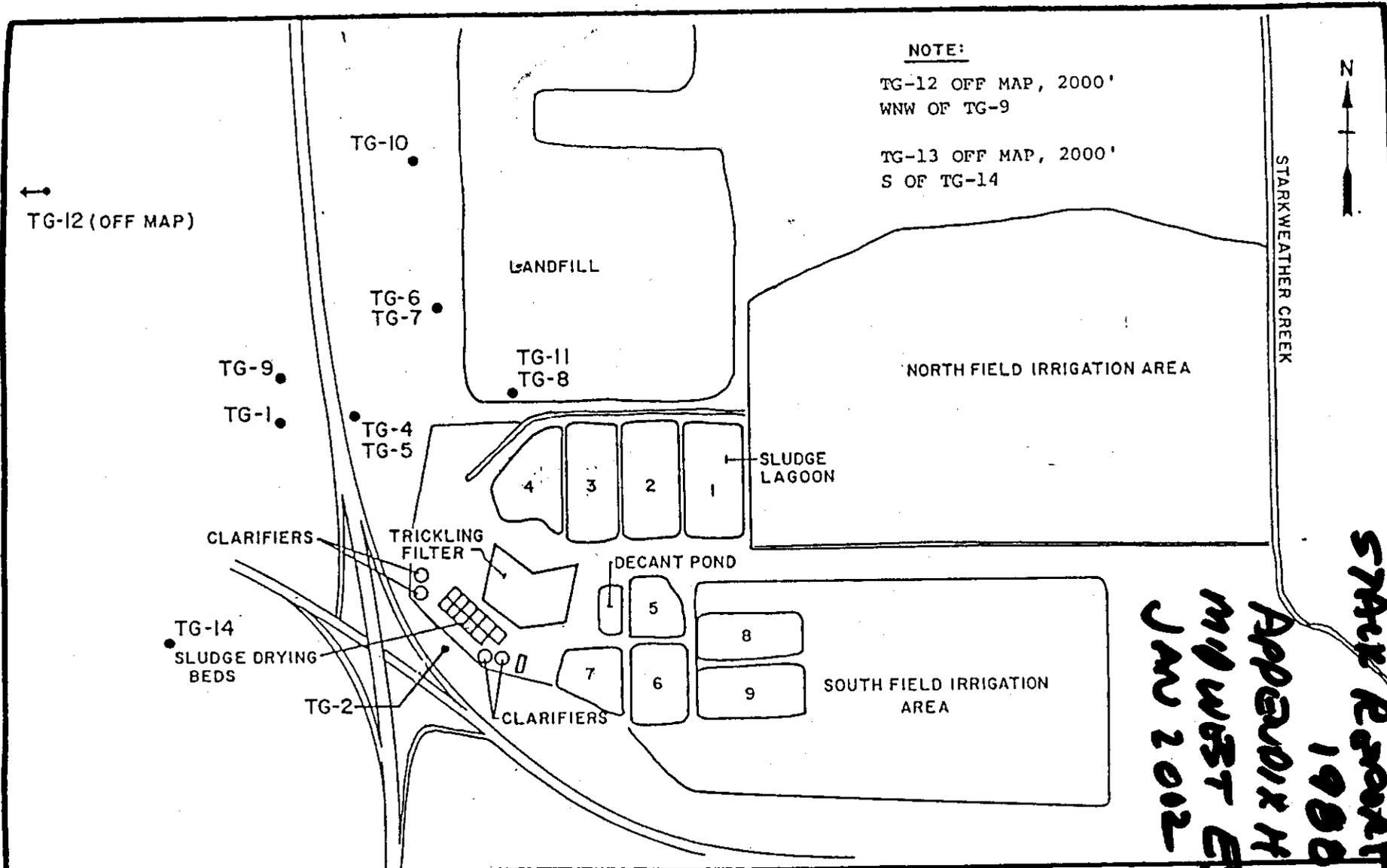
PROJ. NO. 4-131-M

SHEET 1
OF 1

DATE
5-2-68

APP'D BY

DRG. NO. A-1075



NOTE:
 TG-12 OFF MAP, 2000'
 WNW OF TG-9
 TG-13 OFF MAP, 2000'
 S OF TG-14

TG-12 (OFF MAP)



0 300 600
 SCALE IN FEET



FIGURE 3-2

Location of Groundwater Wells

*SOURCE - DENNIS
 STARK REPORT
 APPENDIX H -
 MQUWBST ESA
 JAN 2012*

SOURCE -

DENNIS STACK
REPORT

1988 ?

TABLE 1-1

SUMMARY OF CONTAMINANTS PRESENT IN GROUNDWATER
IN EXCESS OF MCLS AND MCLGS

Well Designation	Site Description	Level of Contaminants, (MCLG/MCL), ug/l						
		Chromium (120*/50)	Cadmium (5*/10)	Mercury (3*/2)	Lead (20*/50)	TCE ^a (0/5)	Vinyl Chloride (0/2)	Xylene (440*/-)
TG-1	Downgradient of landfill				30			
TG-2	Downgradient of WWTP	94	7		124			
TG-3	Near Burn Pit				24			705
TG-5	Well 200S Downgradient of landfill							
TG-9	Well 152 Downgradient of landfill	302	12		333			
TG-10	Well 104 Downgradient of landfill	178	5		157	3.9		
TG-11	Well 101 Downgradient of landfill			2	62		16.7	
TG-12	Madison Well No. 7							
TG-13	Oscar Mayer Well No. 3					11.0		
TG-14	Oscar Mayer Well No. 5					2.2		

* = Proposed

a = TCE = Trichloroethylene

MCLG = Maximum Contaminant Level Goal

MCL = Maximum Contaminant Level

Blank entries indicate MCLs and/or MCLGs were not exceeded

APPENDIX C

PORTIONS OF DAMES & MOORE REPORT MAY 1992

OFFICE COPY

RECEIVED

JUN 02 1992

**BUREAU OF SOLID
HAZARDOUS WASTE MANAGEMENT**

**TRUAX LANDFILL
ENVIRONMENTAL CONTAMINATION
ASSESSMENT REPORT**

MADISON, WISCONSIN

MAY 1992

 **DAMES & MOORE**

JOB NO. 16289-007

WELL NUMBER	ELEVATION TOP OF PVC (FT MSL)	ELEVATION GROUND SURFACE (FT MSL)	TOTAL BOREHOLE DEPTH (FT)	DEPTH SCREEN BOTTOM (FT)	ELEVATION SCREEN BOTTOM (FT MSL)	DEPTH SCREEN TOP (FT)	ELEVATION SCREEN TOP (FT MSL)	DEPTH BOTTOM OF SEAL (FT)	ELEVATION TOP OF FILTER PACK (FT MSL)
MW-1	858.43	856.0	19.5	19.0	837.0	9.0	847.0	5.2	850.8
MW-1A	858.33	856.0	203	200.0	656.0	195.0	661.0	191.0	665.0
MW-2	885.15	883.1	66.5	55.0	828.1	45.0	838.1	41.0	842.1
MW-3	884.37	881.4	62.0	62.0	819.4	52.0	829.4	47.3	834.1
MW-3A	884.48	881.4	127.5	125.0	756.4	120	761.4	115.0	766.4
MW-4	860.89	858.9	19.5	18.2	840.7	8.2	850.7	4.0	854.9
MW-4A	860.55	858.7	204.0	191.4	667.3	186.4	672.3	174.8	683.9
MW-4B	859.91	858.5	280	278.0	580.5	273.0	585.5	267.9	590.6
MW-5	856.31	854.3	18.0	17.9	836.4	7.9	846.4	4.0	850.3
MW-5A	855.53	854.3	176.5	176.0	678.3	171	683.3	167.0	687.3
MW-5B	855.67	854.3	372	348.0	506.3	343.0	511.3	338.0	516.3
MW-6	853.60	851.7	14.0	13.5	838.2	3.5	848.2	2.5	849.2
MW-7	852.68	847.7	15.0	12.5	835.2	2.5	845.2	1.5	846.2
MW-8	852.10	849.1	15.0	12.0	837.1	2.0	847.1	1.5	847.6
MW-9	888.84	886.4	78.0	61.0	825.4	51.0	835.4	46.5	839.9
MW-10	859.57	857.2	15.4	15.4	841.8	5.4	851.8	3.0	854.2
MW-11	883.91	881.6	45.0	44.0	837.6	34.0	847.6	30.0	851.6
MW-12A	884.80	882.3	22.0	20.0	862.3	10.0	872.3	5.9	876.4
MW-12B	884.68	882.3	62.0	59.3	823.0	49.3	833.0	45.0	837.3
MW-13	893.61	891.7	66.5	66.0	825.7	56.0	835.7	47.5	844.2
MW-13A	893.67	891.5	149.0	148.3	743.2	143.3	748.2	137.0	754.5
MW-14	864.79	863.0	29.0	27.5	835.5	17.5	845.5	13.4	849.6
TG-1	865.68	862.9	28.8	28.3	834.6	18.3	844.6	16.8	846.1
TG-2	861.09	858.4	25.5	24.5	833.9	14.5	843.9	12.9	845.5

1 - All depths are measured from ground surface

2 - Includes fine-grained sand seal

Plan Sheet 16. The potentiometric surface map is not entirely valid because the piezometers in the bedrock are screened at different elevations. In addition, two piezometers are installed below the clay confining unit while the other two piezometers installed in the bedrock are under unconfined conditions. However, based on the hydrogeologic data obtained from this investigation, the groundwater flow direction in the lower aquifer as illustrated on the potentiometric surface map (Plan Sheet 16) is believed to be representative of actual conditions.

2.1 Groundwater Flow

Groundwater flows through geologic materials from points of higher hydraulic head to points of lower head; hydraulic head being indicated by water levels. The rate of groundwater flow is proportional to the permeability of the geologic material and the hydraulic gradient. Permeability indicates the ease through which water can move through the material. The hydraulic gradient is the ratio between the difference in hydraulic head and the distance along the flow path.

The water table contour maps illustrate that groundwater flow across the landfill site area is to the west-northwest at an average horizontal gradient of 0.016 ft/ft. The horizontal hydraulic gradient over the central part of the landfill is approximately 0.007 ft/ft. The gradient increases to approximately 0.026 ft/ft as the bedrock high or groundwater trough is approached. Groundwater flow over the eastern part of the landfill appears to be east towards Starkweather Creek at a gradient of approximately 0.007 ft/ft. Groundwater flow near the southern edge of the landfill is south, east, and west, or away from the groundwater mound created by the perched water condition in this area of the site. A comparison of the two water table contour maps presented on Plan Sheet 14 and Plan Sheet 15 indicate that seasonal water level fluctuations have little effect on flow conditions in the upper aquifer in the site area.

Groundwater flow conditions in the unconfined glacial aquifer are consistent with flow conditions presented in a study performed by Kaufman in 1969. A water table contour map prepared by Kaufman is presented in Appendix F. The most significant data presented on this

7.2.1.1 Groundwater Samples

The indicator parameters alkalinity, chemical oxygen demand (COD), hardness and Total Dissolved Solids generally exceeded background levels in the monitoring wells downgradient of the landfill and wastewater treatment plant. The highest values for alkalinity, COD, and hardness were measured in samples from the water table wells MW-10, MW-5, and MW-6, respectively. The highest values were consistently found in the water table well samples, although COD values were considerably higher than background levels in samples from the piezometers MW-4B and MW-5A. Specific conductance was significantly higher than background levels in many samples from the downgradient wells. Similarly, TDS levels were also generally higher than background levels for the downgradient wells. Indicator parameter concentrations were occasionally higher in samples from the wells screened in the deeper aquifer compared to samples from wells screened in the shallow aquifer in some well nests.

Chloride, manganese, copper, color, Nitrate/Nitrogen and sulfate all exceeded the Public Welfare Enforcement Standards (ES) for these compounds in some well samples. Nitrate/Nitrogen exceeded the ES at water table wells MW-4 and MW-5, and also the PAL at water table wells MW-3, MW-9, and TG-2, and at intermediate depth piezometer MW-3A. The heavy metals arsenic, cadmium, chromium, lead, and selenium were detected in several monitoring well samples. Arsenic concentrations exceeded the PAL in samples from shallow monitoring wells 200S and MW-8 and in samples from the intermediate depth piezometers MW-4A and MW-5A. In the area of the former treatment plant, arsenic concentrations exceeded the ES in a sample from monitoring well MW-10 with a concentration of 84.5 µg/l.

Selenium concentrations exceeded the PAL in samples collected from monitoring wells MW-9 and TG-2 and approached the ES in the sample from well MW-5. Concentrations of heavy metals were also detected in samples from wells in the wastewater treatment plant area and in the WWTP irrigation area east of the landfill. In addition, no heavy metals were detected in the deeper sandstone aquifer except for trace amounts of chromium in the sample from piezometer MW-3A, cadmium in the sample from piezometer MW-1A, and lead in the sample from Oscar Mayer cooling water supply well OM-5.

Chloride was detected in L of 125 mg/l in six shallow water table wells and one deep piezometer. Four of the six shallow wells exceeded the ES of 250 $\mu\text{g/l}$. A concentration of 210 $\mu\text{g/l}$ was detected in the deep piezometer MW-5B screened below the aquitard. Fluoride was detected at concentrations above the PAL of 0.44 mg/l in a total of seven monitoring wells, none of which exceeded the ES of 2.2 mg/l. Sulfate exceeded the PAL of 125 mg/l in six shallow water table wells: MW-6, MW-7, MW-8, MW-9, MW-10, TG-1. The highest concentration was detected in MW-8 at 1210 mg/l.

The heavy metals arsenic, barium, chromium, and lead were detected in several monitoring well samples. Arsenic concentrations exceeded the PAL of 5 $\mu\text{g/l}$ in four shallow water table wells (MW-10, MW-8, MW-6, and 200S) and in two piezometers (MW-4A and MW-5A). The concentration detected in MW-10 (90.6 $\mu\text{g/l}$) also exceeded the ES of 50 $\mu\text{g/l}$. Trace amounts of arsenic were detected in the shallow water table wells MW-2 and TG-2 and the upgradient piezometer MW-1A. The arsenic concentration detected in MW-7 (4.0 $\mu\text{g/l}$) approached the PAL of 5 $\mu\text{g/l}$. No arsenic was detected below the aquitard. Arsenic concentrations appear to be highest near MW-10 which is located between the Truax Landfill and the Burke Wastewater Treatment Plant.

Barium was detected in trace amounts in a total of six shallow water table wells and one piezometer MW-1A. These values were the same as or slightly exceeded the PAL and detection limit of 0.2 mg/l. None of the concentrations were above the ES of 1 mg/l or the upgradient background levels.

Chromium was detected in trace amounts in piezometer MW-3A and in four shallow water table wells including the upgradient well MW-1. Lead was also detected in trace amounts in three shallow water table wells and the two Oscar Mayer water supply wells. Neither the PAL or ES for either lead or chromium were exceeded in any of the well samples.

Manganese was detected in 14 wells at concentrations exceeding the PAL of 0.025 mg/l. Twelve of these are also above the ES of 0.05 mg/l. The highest values detected were for MW-6 (1.00 mg/l), MW-10 (1.00 mg/l), TG-1 (0.83 mg/l), MW-5 (0.82 mg/l), and MW-8 (0.45 mg/l).

exceeded the PAL of 0.025 mg/l in samples from all wells at least once during the investigation with the exception of one water table well (MW-14) and three piezometers (MW-3A, MW-5A, and MW-13A), which had samples with no detectable manganese throughout the study. Samples from sixteen wells had manganese concentrations that regularly exceeded the ES of 0.05 mg/l.

Zinc was detected in samples collected from seven water table wells, two water supply wells, and one piezometer. All detects were significantly less than the PAL of 2.5 mg/l. The highest concentration was detected in a sample from monitoring well MW-10 at 0.51 mg/l.

The heavy metals arsenic, barium, chromium, cadmium, lead and selenium were detected in samples from many wells throughout the investigation. Arsenic concentrations were detected in samples collected from ten wells during the investigation. Sample concentrations exceeded the PAL of 5 $\mu\text{g/l}$ from four water table wells (MW-5, MW-6, MW-8, and MW-10), air lift well P-200S, and two deep piezometers (MW-4A and MW-5A). Samples from wells MW-4A, MW-5A, and MW-10 consistently showed the highest concentrations of arsenic. Samples from well MW-10 exceeded the ES of 50 $\mu\text{g/l}$ twice with concentrations of 84.5 $\mu\text{g/l}$ and 90.6 $\mu\text{g/l}$ in samples collected during Phase I of the investigation. Arsenic concentrations have generally remained stable or increased slightly with time in samples collected from the deep piezometers. Arsenic concentrations have remained stable or decreased slightly with time as indicated by results of samples obtained from the shallow water table wells.

Barium concentrations attained or exceeded the PAL of 0.2 mg/l in samples from shallow water table wells TG-1 and MW-11 and from the piezometer MW-1A. The highest concentration of 0.67 mg/l was detected in a sample collected from MW-11 during the September 1991 sampling event. Trace concentrations were detected in samples from all other wells.

Trace concentrations of chromium were detected in samples from six shallow water table wells and two piezometers throughout the investigation. The highest concentration was measured in a sample collected from water table well MW-9 at 2.9 $\mu\text{g/l}$ (Phase I), which is well below the PAL of 5 $\mu\text{g/l}$.

Nitrogen (nitrate + nitrite) concentrations are generally low in the upper aquifer and in the lower bedrock aquifer. Nitrogen concentrations exceeded the ES in samples from water table observation wells MW-3, MW-4, MW-5, MW-7, MW-8, and TG-2 and piezometer MW-3A. The highest readings were measured in samples obtained from monitoring wells located downgradient of active agricultural fields.

The heavy metals arsenic, barium, chromium, and lead were detected in samples from several monitoring wells and piezometers. In general, elevated levels of heavy metals were found in samples obtained from water table wells located in the area of the former wastewater treatment plant. The detection of heavy metals in the water table observation wells and the intermediate piezometers screened above the aquitard, and the absence of heavy metals in the piezometers screened in the lower bedrock aquifer below the aquitard, indicates that movement of these constituents are constrained by the aquitard.

Total aromatic (volatile organic) compounds were detected at least once in 17 of the 25 monitoring wells during the investigation. With the exception of well MW-5, all of the detects measured in samples collected from the monitoring wells during the Phase I investigation showed non-detect during the Phase II Investigation. Toluene was detected in all three rounds of samples collected from monitoring well MW-13 during the second phase of the investigation. Benzene was detected in samples from monitoring well MW-12B during the first and second rounds of (phase II) sampling. No aromatic compounds were detected in samples from either Phase I or Phase II in monitoring wells MW-4B, MW-5A, MW-5B, MW-10, MW-11, MW-13A, MW-14 or 200S. Concentrations of aromatic compounds detected in monitoring wells MW-1, MW-1A and MW-13 indicate that upgradient sources could be contributing aromatic compounds to the groundwater.

Chlorinated aliphatic (volatile organic) compounds were detected at least once in 7 of the 26 wells sampled during the investigation. Chlorinated compounds were detected in monitoring wells MW-2, MW-4B, MW-5B, MW-12B, and MW-14, and cooling water supply wells OM-3 and OM-5. Significant concentrations of tetrachloroethene and trichloroethene were detected in

chloride may result from the weathering of naturally occurring and evaporite deposits. Elevated chloride concentrations in groundwater generally indicate seepage from sludge or sewage facilities or other contamination sources. Chloride concentrations are generally a good indicator of contamination because chlorides are not adsorbed or attenuated by soils.

7.5.6 Heavy Metals

Concentrations of metals in most natural groundwater systems are generally low except in heavily mineralized regions. Metals are less likely to be a cause of significant deterioration of groundwater quality than most other contaminants. Elevated concentrations of metals in groundwater have been attributed to industrial and municipal landfills, mining operations, spills, sludge disposal operations and industrial sources.

The primary attenuation processes controlling metal ion concentrations in groundwater are adsorption-desorption and solution-precipitation reactions. Metal ions are relatively immobile in normal groundwater conditions due to their limited solubility and their affinity for adsorption to soil particles. Metal ions become more mobile in conditions of extreme pH which exerts an influence on the solubility and adsorption of these contaminants.

Shallow aerobic (oxygenated) groundwater zones are especially susceptible to hexavalent chromium contamination. Under oxidizing conditions, insoluble trivalent chromium (Cr^{+3}) becomes oxidized to the more soluble hexavalent chromium (Cr^{+6}) and undergoes little retardation by adsorption.

7.5.7 Organic Compounds

Contamination of groundwater by organic compounds has increased due to the increased use and production of synthetic organic compounds and advanced detection methods of analytical chemistry. The toxicity of many of these compounds is unknown; however, it is recognized that low levels of these contaminants represent an environmental and health concern.

APPENDIX D

**RMT GROUNDWATER MONITORING REPORT
DECEMBER 15, 2010**



December 15, 2010

Mr. Jim Kralick
Hydrogeologist
South Central Region Office
Wisconsin Department of Natural Resources
3911 Fish Hatchery Road
Fitchburg, WI 53711

Subject: Second Semiannual 2010 Groundwater Monitoring Results
Dane County Truax Landfill; License No. 03306

Dear Mr. Kralick:

On behalf of Dane County Regional Airport (DCRA), RMT is submitting this September 2010 semiannual groundwater monitoring report for the Truax Landfill, in accordance with the October 15, 2007 Plan Approval Modification. A copy of the exceedence report and a computer diskette containing the groundwater results have been submitted to the GEMS Data Coordinator of the Bureau of Waste Management, Wisconsin Department of Natural Resources (WDNR), Central Office.

Groundwater Monitoring Program

Groundwater from the following 20 monitoring wells/piezometers was sampled and analyzed for field and indicator parameters during the September 2010 monitoring round:

- MW-1 / MW-1A
- MW-3 (with duplicate sample)/ MW-3A
- MW-4 / MW-4A / MW-4B
- MW-5 / MW-5A / MW-5B
- MW-7
- MW-10
- MW-11
- MW-12B / MW-12C
- MW-13 / MW-13A (with duplicate sample)
- MW-14
- MW-15
- TG-02

E:\WPMSN\FJT\00-03915\16\L000391516-037.DOCX

744 Heartland Trail • Madison, WI 53717 • 608.831.4444 • 608.831.3334 FAX • www.rmtinc.com

CREATING BALANCE™

Groundwater Levels and Flow

Water levels were measured at all the landfill monitoring wells on September 28 to 30, 2010. The following observations were made:

- Groundwater elevations have remained relatively consistent over the last few years, with 18 out of the 20 well locations exhibiting a steady elevation trend over the last couple of monitoring rounds.
- Groundwater elevations in the deeper wells, most notably MW-1A, MW-4B, and MW-5B continue to remain relatively consistent, since approximately 2006.
- The groundwater elevations in the "A-series" wells, including MW-1A, MW-3A, MW-4A, MW-5A, and MW-13A, have continued to match the groundwater elevation in the water table wells.
- Overall, the monitoring results continue to indicate a steady decrease in magnitude of the vertical downward gradients over the last several years. These downward gradients have diminished from historical values and flow has become more horizontal across the aquifer(s).

Shallow groundwater at the site flows radially away from the landfill. This interpretation is historically consistent. The shallow groundwater flow may be affected by the proximity of the landfill to the Bridges Golf Course (recharge from irrigation and surface ditches along the southeastern side of the landfill), the DCRA (large impervious surfaces), and industrial/commercial areas (numerous storm drains and impervious surfaces). Regional groundwater likely flows southwesterly toward the Yahara River/Lake Mendota.

Groundwater Quality

Attachment 1 includes:

- the environmental monitoring data certification for the groundwater data
- a summary of the water quality indicator parameters that exceeded the current NR 140.10 Preventive Action Limits (PALs) and Enforcement Standards (ESs)
- a summary of the water quality indicator parameters that exceeded the well-specific PALs

Groundwater analytical results that exceeded NR 140.10 limits included the following:

- The ES exceedences occurred in 7 of the 20 wells sampled during the September 2010 round.
- The PAL exceedences occurred in 15 of the 20 wells sampled during the September 2010 round.
- The three wells with no NR 140.10 ES or PAL exceedences were MW-13A, MW-14, and MW-15.

The distribution and magnitude of NR 140 exceedences were evaluated by observing the trends in the concentrations at individual wells from over 18 years of monitoring data. Only parameters with exceedences during the September 2010 monitoring event were evaluated as follows:

Mr. Jim Kralick

Wisconsin Department of Natural Resources

December 15, 2010

Page 3

- **Arsenic** – Arsenic (dissolved) exceeded the ES standards in two wells (MW-4A and MW-5A), which is consistent with previous years. Arsenic concentrations have exhibited an overall decreasing trend since 2006 at MW-4A and since 2007 at MW-5A. Arsenic concentrations were between the PAL and ES in two wells (MW-7 and MW-10), which is consistent with previous years. The trend in arsenic concentrations had historically fluctuated markedly in MW-10, which is in the design management zone (DMZ), but remains within the historic range of values.
- **Cadmium** – Cadmium (dissolved) concentration was between the PAL and ES at one well, MW-7 (estimated), which is consistent with previous years.
- **Iron** – Iron (dissolved) exceeded the ES standard in two wells (MW-4B and MW-5B) and concentrations were between the PAL and ES in three wells (MW-04A, MW-05A and MW-10), which is consistent with previous years. Concentrations have historically shown variability at these monitoring locations, except at MW-5A. The iron concentration is highest in well MW-10 (DMZ well), however the concentration has exhibited a decreasing trend since 2008.
- **Manganese** – Manganese (dissolved) exceeded the ES standard in four wells (MW-4B, MW-5, MW-5B, and MW-7) and concentrations were between the PAL and ES in three wells (MW-1A, MW-10, and MW-12C), with MW-10 and MW-12C located in the DMZ. The concentration at MW-7 appears to be decreasing since 2002. The PAL exceedence at MW-12C is the first exceedence recorded for that well. Historical concentrations in these wells exhibit minor fluctuations at similar concentrations. The highest concentration is in MW-10.
- **Nitrates/Nitrites, as Nitrogen** – Nitrates/nitrites exceeded the ES standard in three wells (MW-5, MW-7, and MW-13) and nitrates/nitrites concentrations were between the PAL and ES in seven wells (MW-1, MW-3, MW-4, MW-5B, MW-11 (DMZ well), MW-12B (DMZ well), and MW-12C (DMZ well)). The nitrates/nitrites concentrations in MW-3 and MW-5B have been trending downward for several years. Concentrations at the other wells are relatively stable, with the exception of MW-1, MW-12B, and MW-13, all of which have exhibited an increasing trend over the past few monitoring rounds. The concentration at MW-7 is quite variable, ranging from below the PAL of 2.0 mg/L to over 200 mg/L.
- **Sulfate** – Sulfate exceeded the ES at one well (MW-7), and the PAL at one well, TG-02. The concentration in MW-7 is consistent with previous years, while the concentration in TG-02 has increased slightly over the past three monitoring rounds.
- **Tetrachloroethene** – Tetrachloroethene (PCE) was detected at concentrations, just above the PAL, at wells MW-12B and MW-12C (both are DMZ wells). The PCE concentration appears to have stabilized at MW-12B over the last several monitoring rounds and the concentration at MW-12C has exhibited a slight decreasing trend since 2008.

Mr. Jim Kralick
Wisconsin Department of Natural Resources
December 15, 2010
Page 4

- **Trichloroethene** – Trichloroethene (TCE) was detected at concentrations between the ES and PAL in two wells, MW-12B (estimated and a DMZ well) and MW-12C (DMZ well), which is consistent with the previous 10 years.
- **Vinyl Chloride** – Vinyl chloride was detected at a concentration between the ES and PAL in one well, MW-12C (an estimated value and a DMZ well), which has exhibited a slight decreasing trend over the past two monitoring rounds.
- **Well-Specific PALs** – Alkalinity had minor PAL exceedences at two wells (MW-3A and MW-12C (DMZ well)), both of which have displayed historical variability. The hardness concentration exceeded the PAL slightly at two wells (MW-12C (DMZ well) and MW-13), with the concentration at MW-12C and MW-13 exhibiting an increasing trend. There were no well-specific PAL exceedences for specific conductance during the September 2010 monitoring round.

Summary of Monitoring Results

The September 2010 exceedences of NR 140 groundwater quality standards are generally consistent with previous monitoring rounds. There is no evidence that suggests a contaminant plume is migrating away from the landfill. Groundwater quality data exhibit both increasing and decreasing trends at wells both upgradient and downgradient of the landfill.

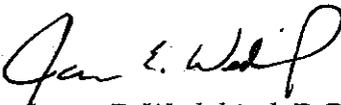
Changes in parameter concentrations over time may reflect changing redox conditions from the degradation of traces of organic compounds, or from the long-term changes in aquifer chemistry associated with increased commercial/industrial development around the DCRA.

In conclusion, analytical results from the September 2010 monitoring event are consistent with previous monitoring results. As stated in previous groundwater monitoring reports, RMT, on behalf of the DCRA, will be submitting a Plan Modification Request in 2011 for a reduction in the groundwater monitoring program. Please contact us if you would like to discuss any proposed changes prior to issuance of this request. If you have any questions or comments, please call us at (608) 831-4444.

Sincerely,

RMT, Inc.


Jason R. Schoephoester
Environmental Scientist


James E. Wedekind, P.G.
Senior Hydrogeologist

Attachments: 1. Environmental Monitoring Data Certification and Exceedence Summaries

cc: Mike Kirchner – DCRA
Curt Madsen – RMT

I:\WPMSN\PT\00-03915\16\L000391516-037.DOCX

PARAMETERS THAT EXCEED CURRENT NR140 REGULATORY STANDARDS
DANE COUNTY TRUAX LANDFILL
LICENSE # 03306, FID # 113183620
SEPTEMBER 2010

CHEMICAL PARAMETER	UNITS	NR140 PAL	NR140 ES	WELL ID	DATE	RESULT	DATA FLAGS	EXCEEDANCE	IN DMZ
ARSENIC, DISSOLVED	UG/L	1	10	MW-004A	9/29/2010	35.5		ES	
				MW-005A	9/29/2010	34.8		ES	
				MW-007	9/30/2010	4.74		PAL	
				MW-010	9/30/2010	35.4		PAL	Y
CADMIUM, DISSOLVED	UG/L	0.5	5	MW-007	9/30/2010	0.93	J	PAL	
IRON, DISSOLVED	UG/L	150	300	MW-004A	9/29/2010	238		PAL	
				MW-004B	9/29/2010	674		ES	
				MW-005A	9/29/2010	276		PAL	
				MW-005B	9/29/2010	1070		ES	
				MW-010	9/30/2010	23500		PAL	Y
MANGANESE, DISSOLVED	UG/L	25	50	MW-001A	9/28/2010	326		PAL	
				MW-004B	9/29/2010	182		ES	
				MW-005	9/29/2010	424		ES	
				MW-005B	9/29/2010	95.5		ES	
				MW-007	9/30/2010	139		ES	
				MW-010	9/30/2010	549		PAL	Y
				MW-012C	9/30/2010	39		PAL	Y
NITROGEN, NITRATE + NITRITE	MG/L	2	10	MW-001	9/28/2010	3.03		PAL	
				MW-003	9/30/2010	3.67		PAL	
				MW-004	9/29/2010	5.47		PAL	
				MW-005	9/29/2010	11		ES	
				MW-005B	9/29/2010	4.79		PAL	
				MW-007	9/30/2010	54.8		ES	
				MW-011	9/29/2010	3.02		PAL	Y
				MW-012B	9/30/2010	7.71		PAL	Y

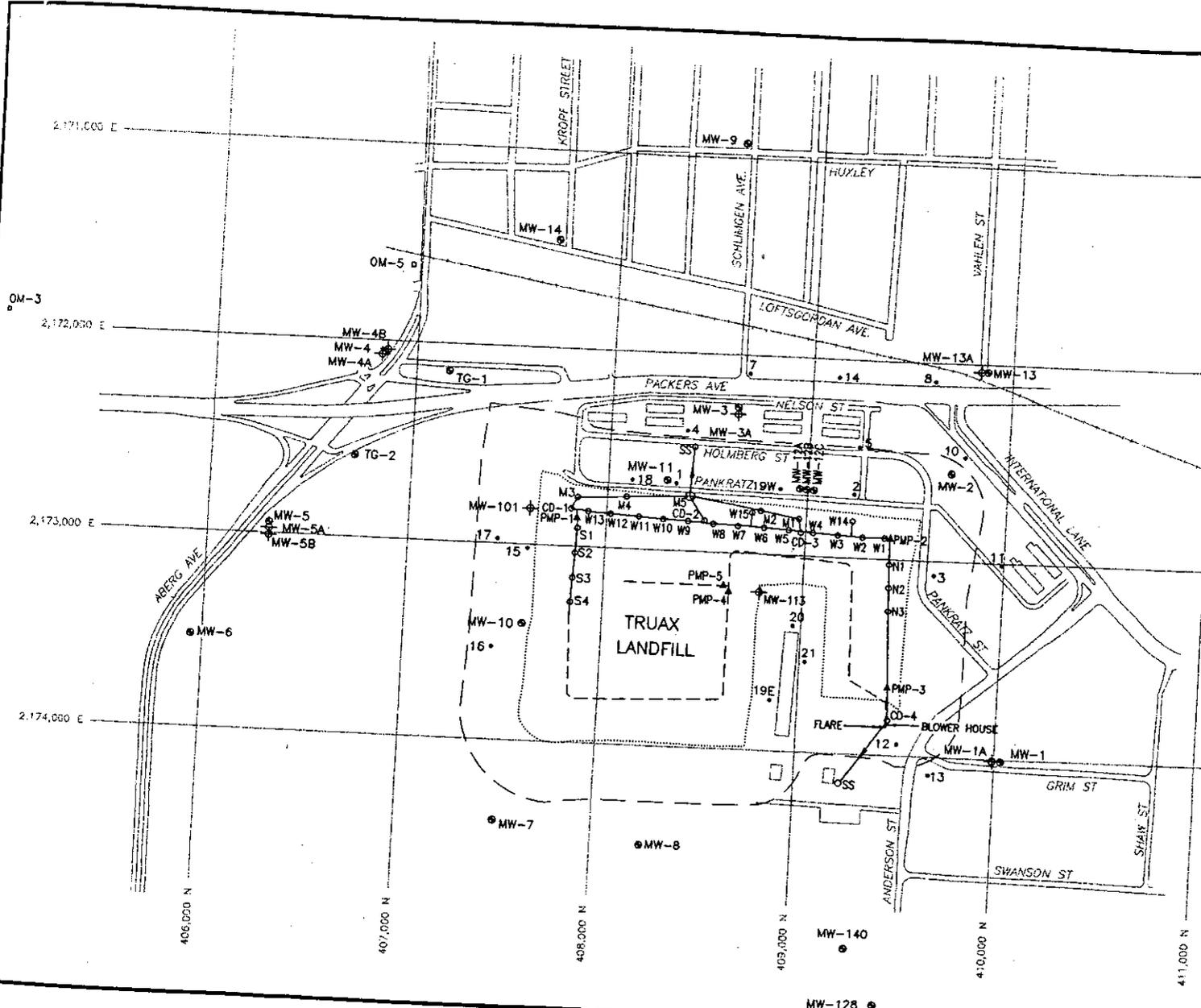
PARAMETERS THAT EXCEED CURRENT NR140 REGULATORY STANDARDS
DANE COUNTY TRUAX LANDFILL
LICENSE # 03306, FID # 113183620
SEPTEMBER 2010

CHEMICAL PARAMETER	UNITS	NR140 PAL	NR140 ES	WELL ID	DATE	RESULT	DATA FLAGS	EXCEEDANCE	IN DMZ
NITROGEN, NITRATE + NITRITE	MG/L	2	10	MW-012C	9/30/2010	2.81		PAL	Y
				MW-013	9/28/2010	15.5		ES	
SULFATE	MG/L	125	250	MW-007	9/30/2010	1270		ES	
				TG-02	9/29/2010	139		PAL	
TETRACHLOROETHENE	UG/L	0.5	5	MW-012B	9/30/2010	1.27		PAL	Y
				MW-012C	9/30/2010	1.11		PAL	Y
TRICHLOROETHENE	UG/L	0.5	5	MW-012B	9/30/2010	0.61	J	PAL	Y
				MW-012C	9/30/2010	2.41		PAL	Y
VINYL CHLORIDE	UG/L	0.02	0.2	MW-012C	9/30/2010	0.29	J	PAL	Y

DATA FLAGS

J: ESTIMATED CONCENTRATION BELOW LABORATORY QUANTIFICATION LEVEL

FILE: C:\DCA\TRUAX\MONLOC.DWG



- LEGEND**
- 8• GAS PROBE
 - MW-2• MONITORING WELL
 - OM-3• HIGH CAPACITY WATER SUPPLY WELL
 - DESIGN MANAGEMENT ZONE
 - LIMIT OF WASTE
 - W2 LANDFILL GAS EXTRACTION WELL AND HEADER PIPE
 - PMP-5A PRESSURE MONITORING PROBE
 - M5O CONDENSATE LIFT STATION
 - M1O CONDENSATE DRAIN MANHOLE
 - CD-10 CONDENSATE DRAIN
 - SSO SANITARY SEWER
 - - - PERFORATED LANDFILL GAS COLLECTION PIPE

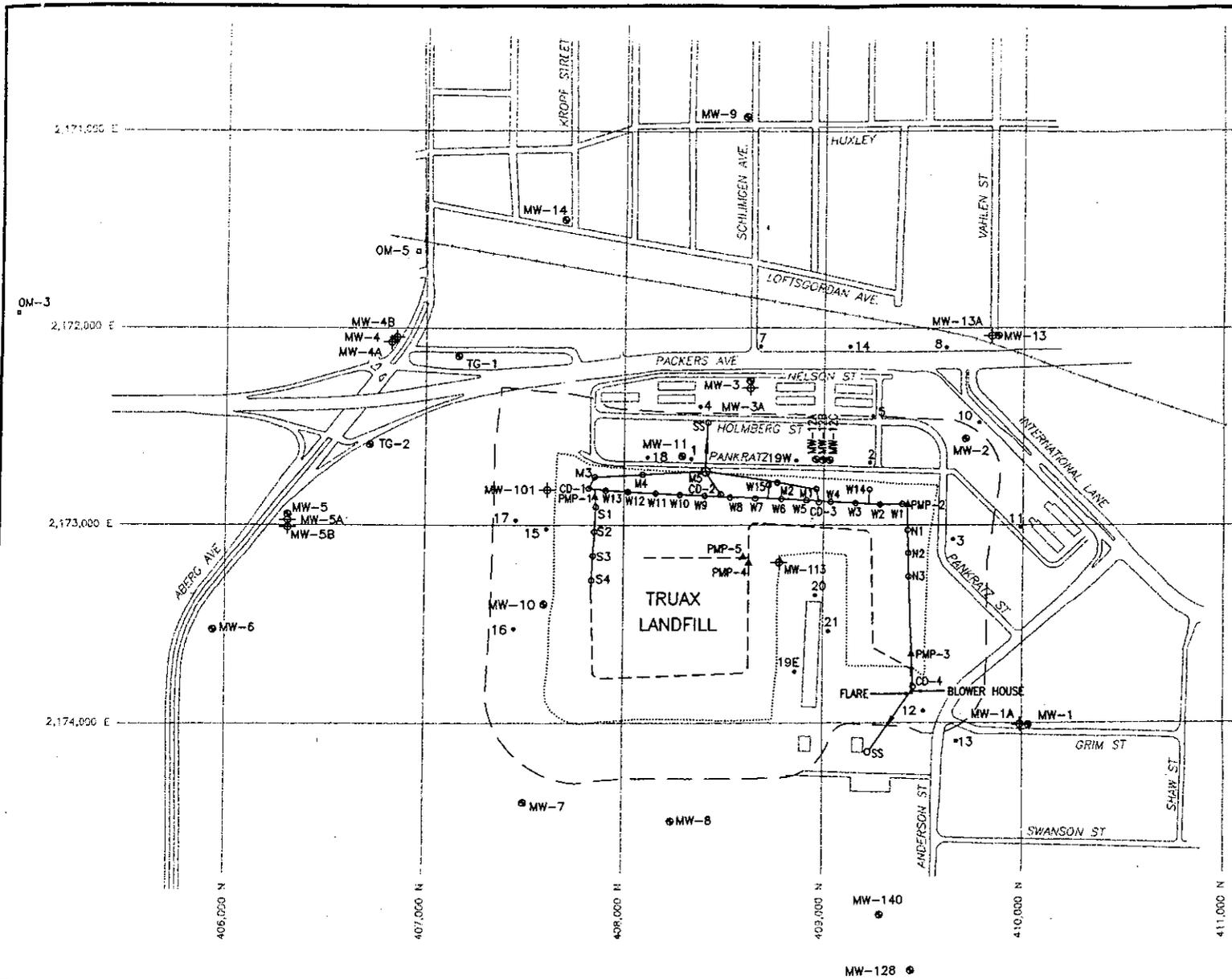


APPROXIMATE SCALE: 1"=500'

CITY OF MADISON TRUAX LANDFILL	
MONITORING LOCATIONS	
DRN BY MC-N	PROJ. NO. 16289-014
DATE AUGUST 1994	DAMES & MOORE

APPENDIX E

**MONITORING LOCATION MAP
SELECTED MONITORING DATA**



LEGEND

- 8 • GAS PROBE
- MW-2 • MONITORING WELL
- OM-3 • HIGH CAPACITY WATER SUPPLY WELL
- DESIGN MANAGEMENT ZONE
- LIMIT OF WASTE
- W2 • LANDFILL GAS EXTRACTION WELL AND HEADER PIPE
- PMP-5 • PRESSURE MONITORING PROBE
- M5 • CONDENSATE LIFT STATION
- M1 • CONDENSATE DRAIN MANHOLE
- CD-1 • CONDENSATE DRAIN
- SS • SANITARY SEWER
- PERFORATED LANDFILL GAS COLLECTION PIPE

NORTH

APPROXIMATE SCALE: 1"=500'

CITY OF MADISON TRUAX LANDFILL	
MONITORING LOCATIONS	
DRW. BY MC-N	PROJ. NO. 16289-014
DATE AUGUST 1994	DAMES & MOORE



All Results for Parameter From Point

License: 3306, Facility Name: DANE CNTY TRUAX LF
 Facility Location: ANDERSON & PANKRATZ - MADISON, Facility Owner: DANE COUNTY

Point ID: 17, Common Name: MW-5

Parameter Code: 1030 - CHROMIUM, DISSOLVED (UG/L CR)

• GEMS Contacts for License (2 Rows)

Sample Date	Duplicate Sample #	Result Amount	Result Qualifier	Result Units Text	LOD	LOQ	Reporting Limit	Analysis Method Code
07/17/1990	1		Non-Detect	ug/L			1.00	NOT REPORTED
10/25/1990	1		Non-Detect	ug/L			1.00	NOT REPORTED
10/21/1991	1		Non-Detect	ug/L			2.00	NOT REPORTED
12/10/1991	1		Non-Detect	ug/L			2.00	NOT REPORTED
03/24/1992	1		Non-Detect	ug/L			2.00	NOT REPORTED
06/24/1992	1		Non-Detect	ug/L			2.00	NOT REPORTED
09/21/1992	1		Non-Detect	ug/L			2.00	NOT REPORTED
12/07/1992	1		Non-Detect	ug/L			2.00	NOT REPORTED
03/09/1993	1		Non-Detect	ug/L			2.00	NOT REPORTED
06/09/1993	1		Non-Detect	ug/L			2.00	NOT REPORTED

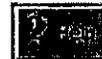
Records 1 to 10 of 10

- [Return to Facility Search](#)
- [Return to GEMS Database Home](#)
- [Download](#)

Last Revised:

Return to dnr.wi.gov
 The Official Internet site for the Wisconsin Department of Natural Resources

101 S. Webster Street · PO Box 7921 · Madison, Wisconsin 53707-7921 · 608.267.3123



All Results for Parameter From Point

License: 3306, Facility Name: DANE CNTY TRUAX LF
 Facility Location: ANDERSON & PANKRATZ - MADISON, Facility Owner: DANE COUNTY

Point ID: 19, Common Name: MW-5A

Parameter Code: 1030 - CHROMIUM, DISSOLVED (UG/L CR)

• GEMS Contacts for License (2 Rows)

Sample Date	Duplicate Sample #	Result Amount	Result Qualifier	Result Units Text	LOD	LOQ	Reporting Limit	Analysis Method Code
07/17/1990	1		Non-Detect	ug/L			1.00	NOT REPORTED
10/25/1990	1		Non-Detect	ug/L			1.00	NOT REPORTED
10/21/1991	1		Non-Detect	ug/L			2.00	NOT REPORTED
12/10/1991	1		Non-Detect	ug/L			2.00	NOT REPORTED
03/24/1992	1		Non-Detect	ug/L			2.00	NOT REPORTED
06/24/1992	1		Non-Detect	ug/L			2.00	NOT REPORTED
09/21/1992	1		Non-Detect	ug/L			2.00	NOT REPORTED
12/07/1992	1		Non-Detect	ug/L			2.00	NOT REPORTED
03/09/1993	1		Non-Detect	ug/L			2.00	NOT REPORTED
06/09/1993	1		Non-Detect	ug/L			2.00	NOT REPORTED

Records 1 to 10 of 10

- [Return to Facility Search](#)
- [Return to GEMS Database Home](#)
- [Download](#)

Last Revised:

Return to dnr.wi.gov
 The Official Internet site for the Wisconsin Department of Natural Resources

101 S. Webster Street · PO Box 7921 · Madison, Wisconsin 53707-7921 · 608.267.3123



All Results for Parameter From Point

License: 3306, Facility Name: DANE CNTY TRUAX LF
 Facility Location: ANDERSON & PANKRATZ - MADISON, Facility Owner: DANE COUNTY

Point ID: 31, Common Name: MW-10

Parameter Code: 1030 - CHROMIUM, DISSOLVED (UG/L CR)

• GEMS Contacts for License (2 Rows)

Sample Date	Duplicate Sample #	Result Amount	Result Qualifier	Result Units Text	LOD	LOQ	Reporting Limit	Analysis Method Code
07/24/1990	1		Non-Detect	ug/L			1.00	NOT REPORTED
10/26/1990	1		Non-Detect	ug/L			1.00	NOT REPORTED
10/21/1991	1		Non-Detect	ug/L			2.00	NOT REPORTED
12/10/1991	1		Non-Detect	ug/L			2.00	NOT REPORTED
03/24/1992	1		Non-Detect	ug/L			2.00	NOT REPORTED
06/24/1992	1		Non-Detect	ug/L			2.00	NOT REPORTED
09/21/1992	1		Non-Detect	ug/L			2.00	NOT REPORTED
12/07/1992	1		Non-Detect	ug/L			2.00	NOT REPORTED
03/09/1993	1		Non-Detect	ug/L			2.00	NOT REPORTED
06/09/1993	1		Non-Detect	ug/L			2.00	NOT REPORTED

Records 1 to 10 of 10

- [Return to Facility Search](#)
- [Return to GEMS Database Home](#)
- [Download](#)

Last Revised:

Return to dnr.wi.gov
 The Official Internet site for the Wisconsin Department of Natural Resources

101 S. Webster Street · PO Box 7921 · Madison, Wisconsin 53707-7921 · 608.267.3123



All Results for Parameter From Point

License: 3306, Facility Name: DANE CNTY TRUAX LF
 Facility Location: ANDERSON & PANKRATZ - MADISON, Facility Owner: DANE COUNTY

Point ID: 35, Common Name: TG-2

Parameter Code: 1030 - CHROMIUM, DISSOLVED (UG/L CR)

• [GEMS Contacts for License \(2 Rows\)](#)

Sample Date	Duplicate Sample #	Result Amount	Result Qualifier	Result Units Text	LOD	LOQ	Reporting Limit	Analysis Method Code
07/19/1990	1	3.1	Detect	ug/L				NOT REPORTED
10/25/1990	1		Non-Detect	ug/L			1.00	NOT REPORTED
10/21/1991	1		Non-Detect	ug/L			2.00	NOT REPORTED
12/10/1991	1	2	Detect	ug/L				NOT REPORTED
03/24/1992	1		Non-Detect	ug/L			2.00	NOT REPORTED
06/24/1992	1		Non-Detect	ug/L			2.00	NOT REPORTED
12/07/1992	1		Non-Detect	ug/L			2.00	NOT REPORTED
03/09/1993	1	2	Detect	ug/L				NOT REPORTED

Records 1 to 8 of 8

- [Return to Facility Search](#)
- [Return to GEMS Database Home](#)
- [Download](#)

Last Revised:

Return to dnr.wi.gov
 The Official Internet site for the Wisconsin Department of Natural Resources

101 S. Webster Street · PO Box 7921 · Madison, Wisconsin 53707-7921 · 608.267.3123



All Results for Parameter From Point

License: 3306, Facility Name: DANE CNTY TRUAX LF
 Facility Location: ANDERSON & PANKRATZ - MADISON, Facility Owner: DANE COUNTY

Point ID: 5, Common Name: MW-2

Parameter Code: 1030 - CHROMIUM, DISSOLVED (UG/L CR)

• GEMS Contacts for License (2 Rows)

Sample Date	Duplicate Sample #	Result Amount	Result Qualifier	Result Units Text	LOD	LOQ	Reporting Limit	Analysis Method Code
07/18/1990	1	1.1	Detect	ug/L				NOT REPORTED
10/24/1990	1	1	Detect	ug/L				NOT REPORTED
10/21/1991	1		Non-Detect	ug/L			2.00	NOT REPORTED
12/10/1991	1		Non-Detect	ug/L			2.00	NOT REPORTED
03/24/1992	1		Non-Detect	ug/L			2.00	NOT REPORTED
06/24/1992	1		Non-Detect	ug/L			2.00	NOT REPORTED
09/21/1992	1		Non-Detect	ug/L			2.00	NOT REPORTED
12/07/1992	1		Non-Detect	ug/L			2.00	NOT REPORTED
03/09/1993	1		Non-Detect	ug/L			2.00	NOT REPORTED
06/09/1993	1		Non-Detect	ug/L			2.00	NOT REPORTED

Records 1 to 10 of 10

- [Return to Facility Search](#)
- [Return to GEMS Database Home](#)
- [Download](#)

Last Revised:

Return to dnr.wi.gov
 The Official Internet site for the Wisconsin Department of Natural Resources

101 S. Webster Street · PO Box 7921 · Madison, Wisconsin 53707-7921 · 608.267.3123



All Results for Parameter From Point

License: 3306, Facility Name: DANE CNTY TRUAX LF
 Facility Location: ANDERSON & PANKRATZ - MADISON, Facility Owner: DANE COUNTY

Point ID: 11, Common Name: MW-4

Parameter Code: 1030 - CHROMIUM, DISSOLVED (UG/L CR)

• GEMS Contacts for License (2 Rows)

Sample Date	Duplicate Sample #	Result Amount	Result Qualifier	Result Units Text	LOD	LOQ	Reporting Limit	Analysis Method Code
07/18/1990	1	2.3	Detect	ug/L				NOT REPORTED
10/26/1990	1	1.7	Detect	ug/L				NOT REPORTED
10/21/1991	1		Non-Detect	ug/L			2.00	NOT REPORTED
12/10/1991	1		Non-Detect	ug/L			2.00	NOT REPORTED
03/24/1992	1	2	Detect	ug/L				NOT REPORTED
06/24/1992	1		Non-Detect	ug/L			2.00	NOT REPORTED
09/21/1992	1	2	Detect	ug/L				NOT REPORTED
12/07/1992	1	2	Detect	ug/L				NOT REPORTED
03/09/1993	1	2	Detect	ug/L				NOT REPORTED
06/09/1993	1	2	Detect	ug/L				NOT REPORTED

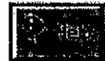
Records 1 to 10 of 10

- [Return to Facility Search](#)
- [Return to GEMS Database Home](#)
- [Download](#)

Last Revised:

Return to dnr.wi.gov
 The Official Internet site for the Wisconsin Department of Natural Resources

101 S. Webster Street · PO Box 7921 · Madison, Wisconsin 53707-7921 · 608.267.3123



All Results for Parameter From Point

License: 3306, Facility Name: DANE CNTY TRUAX LF
 Facility Location: ANDERSON & PANKRATZ - MADISON, Facility Owner: DANE COUNTY

Point ID: 33, Common Name: TG-1

Parameter Code: 1030 - CHROMIUM, DISSOLVED (UG/L CR)

• GEMS Contacts for License (2 Rows)

Sample Date	Duplicate Sample #	Result Amount	Result Qualifier	Result Units Text	LOD	LOQ	Reporting Limit	Analysis Method Code
07/23/1990	1		Non-Detect	ug/L			1.00	NOT REPORTED
10/25/1990	1		Non-Detect	ug/L			1.00	NOT REPORTED
10/21/1991	1		Non-Detect	ug/L			2.00	NOT REPORTED
12/10/1991	1		Non-Detect	ug/L			2.00	NOT REPORTED
03/24/1992	1		Non-Detect	ug/L			2.00	NOT REPORTED
06/24/1992	1		Non-Detect	ug/L			2.00	NOT REPORTED
09/21/1992	1		Non-Detect	ug/L			2.00	NOT REPORTED
12/07/1992	1		Non-Detect	ug/L			2.00	NOT REPORTED
03/09/1993	1		Non-Detect	ug/L			2.00	NOT REPORTED

Records 1 to 9 of 9

- [Return to Facility Search](#)
- [Return to GEMS Database Home](#)
- [Download](#)

Last Revised:

Return to dnr.wi.gov
 The Official Internet site for the Wisconsin Department of Natural Resources

101 S. Webster Street · PO Box 7921 · Madison, Wisconsin 53707-7921 · 608.267.3123



All Results for Parameter From Point

License: 3306, Facility Name: DANE CNTY TRUAX LF
 Facility Location: ANDERSON & PANKRATZ - MADISON, Facility Owner: DANE COUNTY

Point ID: 23, Common Name: MW-6

Parameter Code: 1030 - CHROMIUM, DISSOLVED (UG/L CR)

• GEMS Contacts for License (2 Rows)

Sample Date	Duplicate Sample #	Result Amount	Result Qualifier	Result Units Text	LOD	LOQ	Reporting Limit	Analysis Method Code
07/18/1990	1		Non-Detect	ug/L			1.00	NOT REPORTED
10/25/1990	1		Non-Detect	ug/L			1.00	NOT REPORTED
10/21/1991	1		Non-Detect	ug/L			2.00	NOT REPORTED
12/10/1991	1		Non-Detect	ug/L			2.00	NOT REPORTED
03/24/1992	1		Non-Detect	ug/L			2.00	NOT REPORTED
06/24/1992	1		Non-Detect	ug/L			2.00	NOT REPORTED
09/21/1992	1	2	Detect	ug/L				NOT REPORTED
12/07/1992	1		Non-Detect	ug/L			2.00	NOT REPORTED
03/09/1993	1		Non-Detect	ug/L			2.00	NOT REPORTED
06/09/1993	1		Non-Detect	ug/L			2.00	NOT REPORTED

Records 1 to 10 of 10

- [Return to Facility Search](#)
- [Return to GEMS Database Home](#)
- [Download](#)

Last Revised:

Return to dnr.wi.gov
 The Official Internet site for the Wisconsin Department of Natural Resources

101 S. Webster Street · PO Box 7921 · Madison, Wisconsin 53707-7921 · 608.267.3123



All Results for Parameter From Point

License: 3306, Facility Name: DANE CNTY TRUAX LF
 Facility Location: ANDERSON & PANKRATZ - MADISON, Facility Owner: DANE COUNTY

Point ID: 25, Common Name: MW-7

Parameter Code: 1030 - CHROMIUM, DISSOLVED (UG/L CR)

• GEMS Contacts for License (2 Rows)

Sample Date	Duplicate Sample #	Result Amount	Result Qualifier	Result Units Text	LOD	LOQ	Reporting Limit	Analysis Method Code
07/24/1990	1		Non-Detect	ug/L			1.00	NOT REPORTED
10/24/1990	1		Non-Detect	ug/L			1.00	NOT REPORTED
10/21/1991	1		Non-Detect	ug/L			2.00	NOT REPORTED
12/10/1991	1		Non-Detect	ug/L			2.00	NOT REPORTED
03/24/1992	1		Non-Detect	ug/L			2.00	NOT REPORTED
06/24/1992	1		Non-Detect	ug/L			2.00	NOT REPORTED
09/21/1992	1		Non-Detect	ug/L			2.00	NOT REPORTED
12/07/1992	1		Non-Detect	ug/L			2.00	NOT REPORTED
03/09/1993	1		Non-Detect	ug/L			2.00	NOT REPORTED
06/09/1993	1		Non-Detect	ug/L			2.00	NOT REPORTED

Records 1 to 10 of 10

- [Return to Facility Search](#)
- [Return to GEMS Database Home](#)
- [Download](#)

Last Revised:

Return to dnr.wi.gov
 The Official Internet site for the Wisconsin Department of Natural Resources

101 S. Webster Street · PO Box 7921 · Madison, Wisconsin 53707-7921 · 608.267.3123



All Results for Parameter From Point

License: 3306, Facility Name: DANE CNTY TRUAX LF
 Facility Location: ANDERSON & PANKRATZ - MADISON, Facility Owner: DANE COUNTY

Point ID: 27, Common Name: MW-8

Parameter Code: 1030 - CHROMIUM, DISSOLVED (UG/L CR)

• [GEMS Contacts for License \(2 Rows\)](#)

Sample Date	Duplicate Sample #	Result Amount	Result Qualifier	Result Units Text	LOD	LOQ	Reporting Limit	Analysis Method Code
07/24/1990	1		Non-Detect	ug/L			1.00	NOT REPORTED
10/24/1990	1		Non-Detect	ug/L			1.00	NOT REPORTED
10/21/1991	1		Non-Detect	ug/L			2.00	NOT REPORTED
12/10/1991	1		Non-Detect	ug/L			2.00	NOT REPORTED
03/24/1992	1		Non-Detect	ug/L			2.00	NOT REPORTED
06/24/1992	1		Non-Detect	ug/L			2.00	NOT REPORTED
09/21/1992	1		Non-Detect	ug/L			2.00	NOT REPORTED
12/07/1992	1		Non-Detect	ug/L			2.00	NOT REPORTED
03/09/1993	1		Non-Detect	ug/L			2.00	NOT REPORTED
06/09/1993	1		Non-Detect	ug/L			2.00	NOT REPORTED

Records 1 to 10 of 10

- [Return to Facility Search](#)
- [Return to GEMS Database Home](#)
- [Download](#)

Last Revised:

Return to dnr.wi.gov
 The Official Internet site for the Wisconsin Department of Natural Resources

101 S. Webster Street · PO Box 7921 · Madison, Wisconsin 53707-7921 · 608.267.3123



All Results for Parameter From Point

License: 3306, Facility Name: DANE CNTY TRUAX LF
 Facility Location: ANDERSON & PANKRATZ - MADISON, Facility Owner: DANE COUNTY

Point ID: 63, Common Name: MW-11

Parameter Code: 1030 - CHROMIUM, DISSOLVED (UG/L CR)

• GEMS Contacts for License (2 Rows)

Sample Date	Duplicate Sample #	Result Amount	Result Qualifier	Result Units Text	LOD	LOQ	Reporting Limit	Analysis Method Code
10/21/1991	1		Non-Detect	ug/L			2.00	NOT REPORTED
12/10/1991	1		Non-Detect	ug/L			2.00	NOT REPORTED
03/24/1992	1		Non-Detect	ug/L			2.00	NOT REPORTED
06/24/1992	1		Non-Detect	ug/L			2.00	NOT REPORTED
09/21/1992	1		Non-Detect	ug/L			2.00	NOT REPORTED
12/07/1992	1		Non-Detect	ug/L			2.00	NOT REPORTED
03/09/1993	1		Non-Detect	ug/L			2.00	NOT REPORTED
06/09/1993	1		Non-Detect	ug/L			2.00	NOT REPORTED

Records 1 to 8 of 8

- [Return to Facility Search](#)
- [Return to GEMS Database Home](#)
- [Download](#)

Last Revised:

Return to dnr.wi.gov
 The Official Internet site for the Wisconsin Department of Natural Resources

101 S. Webster Street · PO Box 7921 · Madison, Wisconsin 53707-7921 · 608.267.3123

APPENDIX F
SOLID WASTE DISPOSAL AREA

FORMER TRUAX LANDFILL
(CURRENT BRIDGES GOLF COURSE)

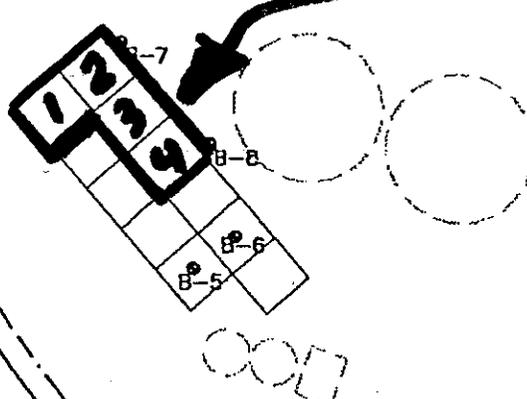
PACKERS AVENUE

APPROXIMATE PROPERTY
BOUNDARY

VP-3 VP-1
VP-2
B-3 B-2
VP-4 B-4 B-1

**SOLID WASTE
DISPOSAL AREA**

VACANT
UNDEVELOPED
LANDS



B-12
B-11
B-10
B-9

LEGEND

- B-12 APPROXIMATE LOCATION ON SOIL BORING ADVANCED USING A GEOPROBE (3-1-02)
- VP-3 APPROXIMATE LOCATION OF VAPOR MONITORING POINT INSTALLED USING A GEOPROBE (3-1-02)
- APPROXIMATE LOCATION AND LAYOUT OF FORMER SITE FEATURES & STRUCTURES
- FORMER SLUDGE DRYING BEDS (STRUCTURE REMAINS)
- APPROXIMATE LOCATION, SIZE AND LAYOUT OF FORMER SLUDGE LAGOONS

**1 UERTEN
12/2/11**

HIGHWAY 30

NOTES

- 1) All dimensions and locations are approximate and are based on data from previous site reports and maps.
- 2) Geoprobe soil borings and vapor sampling points installed on March 1, 2002 by Soil Essentials. Sampling points located using fence line.
- 3) See Figure 1 for site location relative to Madison, Wisconsin.



SCALE: 1" = 200'

REA RESOURCE ENGINEERING ASSOCIATES, INC.
8505 University Green, Suite 200
Middleton, Wisconsin 53562-2507
608-831-6563 (Fax 831-6564)

REYNOLDS PROPERTY
1401 Packers Avenue
Former Burke Wastewater Treatment Plant
Madison, Wisconsin

Date: Mar 2002
Drawn: SKB
Ck'd: WWB
Proj #02008.1

**SITE LOCATION, FORMER FEATURES &
GEOPROBE SOIL BORING LOCATIONS**

reynolds2.dwg
FIGURE 2